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# Journal of California and Great Basin Anthropology

#### **Title**

McGuire and Garfinkel: Archaeological Investigations in the Southern Sierra Nevada: The Bear Mountain Segment of the Pacific Crest Trail

## **Permalink**

https://escholarship.org/uc/item/99x6f6r6

## **Journal**

Journal of California and Great Basin Anthropology, 4(1)

#### **ISSN**

0191-3557

#### **Author**

Moratto, Michael I

### **Publication Date**

1982-07-01

Peer reviewed

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the tale was recorded, etc. This organization and information will prove invaluable to anyone attempting further analysis and/or comparison of these data, and Zigmond should be congratulated on this basis alone.

In addition, Zigmond provides an introduction which establishes a framework both for understanding and appreciating these tales at first reading and which suggests avenues of further research, and indeed, even seems to be an invitation to further research. He discusses the variation exhibited in terms of the particular narrators and collectors involved and in terms of the composite, segmental structure of the myths. These myths, like many others in California and the Great Basin, consist of a number of incidents which are strung together to create a composite tale. In some versions or tellings one or more of these incidents may be deleted, and in other circumstances these segments may be combined with others to create new tales, thus promising to confound structurally oriented analyses.

Perhaps most importantly, Zigmond considers regional comparisons and examines ten close comparisons with Chemeheuvi myths recently published by Laird (1976). The Chemeheuvi are both near neighbors to the east of the Kawaiisu and close linguistic relatives, and this brief, initial comparison of their myths suggests that this is a fruitful area for future research for identifying cultural relationships between the "Californian" and "Basin" groups which come together in the region.

Zigmond also briefly analyzes Coyote, the main character of most of the myths. He sees Coyote as a complex and enigmatic character who plays multiple and sometimes contradictory roles. I, for one, am glad to see Coyote transcend the role of "trickster," which he is usually assigned, since it has long seemed to me that in many instances in California and Basin myths, Coyote is much more. Perhaps the door is now open for a fuller and more

original interpretation of his character.

There are still many questions to be answered about the Kawaiisu, and one hopes that Zigmond will continue to prepare his fieldnotes, which must yet be rich with data, for future publication. Nonetheless, we now have available a fine contribution to Kawaiisu ethnography, and it is one which reflects the flavor of the culture which is otherwise unobtainable, for it is through myth that culture speaks and teaches.

#### REFERENCE

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1976 The Chemehuevis. Banning: Malki Museum
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Archaeological Investigations in the Southern Sierra Nevada: The Bear Mountain Segment of the Pacific Crest Trail. Kelly R. McGuire and Alan P. Garfinkel, with contributions by Mark Basgall, Robert Jobson, David Rhode, and T. B. Ruhstaller. U. S. Bureau of Land Management Cultural Resources Publications, Archaeology, unnumbered, 1980, xii + 304 pp., gratis (paper).

Reviewed by MICHAEL J. MORATTO

Dept. of Anthropology
Calif. State Univ.
Fresno, CA 93740

This report, one in a series of archaeological studies published in recent years by the Bureau of Land Management (BLM), describes the first systematic testing of high-elevation sites in the far southern Sierra Nevada.

Under contract with BLM, Kelly McGuire (Far Western Anthropological Research Group, Inc.) in 1978 directed fieldwork along the 29-km. Bear Mountain segment of the Pacific Crest Trail (PCT) in eastern Kern and Tulare counties. Situated between Lamont

Meadow and Rockhouse Basin (elev. 1980-2430 m.) and about 4 km. west of the Sierran crest, this is an area of rugged terrain characterized by meadow, piñon woodland, and sagebrush scrub vegetation types.

Surface collecting and testing at 15 jeopardized sites revealed a settlement pattern featuring large, "piñon-gathering base camps" and smaller, temporary piñon stations and hunting camps dated on the basis of projectile point types and obsidian hydration measurements. Synthesizing available data, McGuire and Garfinkel (pp. 49-53) defined for the southern high Sierra the following prehistoric phases:

Lamont Phase (4000-1200 B.C.): Recognized by Pinto points and basalt as a material for chipped stone tools, this phase is thought to represent sporadic forays into upland areas by hunting parties from base camps farther east (perhaps in the Owens or Indian Wells valleys). Occasional, limited gathering of piñon nuts also is suggested.

Canebrake Phase (1200 B.C.-A.D. 600): Millingstones, along with Sierra Concave Base. Elko, and Humboldt Concave Base projectile points, are characteristic. "Piñon base camps" and temporary stations in upland areas are seen as evidence of settlement, exploitation of piñon nuts, hunting, and harvesting bulbs and seeds. It is possible that substantial occupation of high-elevation areas was permitted by environmental changes favoring the spread of piñon. McGuire and Garfinkel (pp. 53-60) suggest that, due to warm, dry climatic conditions between ca. 3000 and 1500 B.C., piñon-juniper zones shifted downslope. Because of steeper angles on the higher slopes. the downward shift would have caused piñon-juniper woodlands to occupy considerably more surface area than previously. This postulated expansion of piñon may have led to the settlement/subsistence strategy of the Canebrake Phase.

Sawtooth Phase (A.D. 600-1300): Intensi-

fied use of the uplands is recorded by more "piñon camps" and greater quantities of obsidian and artifacts than before. The Sawtooth Phase is identified by Rose Spring and Eastgate points, manos and millingstones, bedrock mortars and cobble pestles, steatite or serpentine disc beads, and (rare) Olivella spire-lopped beads.

Chimney Phase (A.D. 1300-historic period): Subsistence-settlement patterns remain unchanged except that increased numbers of sites and artifacts imply more intensive occupation. Typical traits are Desert Side-notched and Cottonwood Triangular arrowpoints, Owens Valley Brown Ware, and stone disc beads; glass beads and Olivella rough disc beads appear in historic times.

In the Bear Mountain vicinity, the Sierran crest formed a boundary between the ethnographic Tübatulabal on the west slope and the Numic Kawaiisu and Panamint of the Great Basin. Interpreting data from the Bear Mountain, Lamont Meadow, and Morris Peak segments of the PCT, McGuire and Garfinkel propose that the Tübatulabalic and Numic groups have been differentiated since ca. 1200 B.C. Archaeologically, this is shown by:

- (1) Rock art: Tübatulabal pictographs are mostly abstract with few representational forms. Rock art (assumed but not demonstrated to be) of Numic origin is distinctive and often depicts anthropomorphs, zoomorphs such as stylized bighorn sheep, and other realistic motifs. Petroglyphs are rare on the Kern Plateau but pictographs are common. Rock art sites more than 0.5 km. west of the Sierran crest conform to the Tübatulabal pattern, whereas those to the east are similar to the style and subject matter of the Coso Range Petroglyphs.
- (2) Settlement patterns: The location of Tübatulabal winter villages near the river in the South Fork Kern Valley may be contrasted with the desert location of Numic villages at the eastern base of the Sierran

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escarpment. Assuming that the seasonal piñon camps of a particular group were closer to its winter village than to that of another group, McGuire and Garfinkel ascribe the clusters of winter villages and piñon camps east and west of the divide to Numic and Tübatulabalic peoples, respectively.

- (3) Flaked stone material: Chalcedony accounts for 5 to 75 percent (by weight) of the flaked stone material found at archaeological sites along the Sierran crest, while the chalcedony-obsidian ratio seldom exceeds 1:20 at sites west of the crestal zone. Chalcedony was obtained from sources to the east and is thought to represent Numic activity.
- (4) Ground stone artifacts: Sites along the Sierran crest produced millingstones made of desert volcanic rocks; in contrast, sites to the west yielded ground stone artifacts manufactured only of local granitic rocks.

All things considered, McGuire and Garfinkel conclude that the Tübatulabalic and Numic occupations may be differentiated archaeologically; that Numic peoples inhabited and exploited the Sierran escarpment and crestal zone; and that the PCT study area must have been part of the Tübatulabal homeland for at least 3000 years.

This is an important study. It defines an archaeological sequence in a previously unknown part of eastern California; it explores the use of archaeological data to trace the early distribution of ethnic groups; and it documents major changes in subsistence and settlement patterns through time. Notable, too, McGuire and Garfinkel show that problem-oriented research can be done in the context of cultural resource management.

In most technical respects, the Bear Mountain report is commendable. Descriptions and analyses of findings are thorough; photographs, maps, and figures are informative and of high quality; and comparative studies evince familiarity with relevant literature and current research. The work is not

without flaws, however, among them numerous errors of spelling, typing, subject/verb agreement, and style. Especially distracting are misspelled proper names: Parlaqui (Panlaqui), Buchanon (Buchanan), Currey (Curry), Van Dervender (Van Devender), etc.; These reflect careless proofreading. A minor complaint is that temporary site designations are used in the text and figures even though "permanent" trinomials had been assigned and are in fact listed in an appendix.

More significant are problems of data interpretation. With regard to cultural chronology, for example, the Lamont Phase was defined and dated on the basis of a very small sample of chipped stone items from one site (Tul-616). While it is surely possible that Lamont Phase hunting parties made "sporadic forays into upland areas" as early as 6000 years ago (p. 52), the evidence for this—two Pinto series points that could be anywhere from 7500 to 4000 years old—is less than compelling.

Turning to subsistence patterns, McGuire and Garfinkel (p. 53) propose that:

... systematic pinyon exploitation began in the southern Sierra Nevada at approximately 1200 B.C. [and] ... the intensity of pinyon exploitation increases for each successive phase up to the ethnographic present. These hypotheses are primarily based on the fact that time-sensitive projectile points first appear in significant quantities within pinyon areas during the Canebrake phase and that large increases are observed for each successive phase.

This notion of early piñon use is based upon the assumed relationship between the frequency of projectile points and the intensity of piñon nut exploitation. Projectile points after all are functionally linked to hunting rather than piñon use, and their diachronic increase may be explained more readily as a result of increased hunting, larger populations, more frequent visits to the high country, or other variables not necessarily

related to piñon exploitation. Moreover, piñon procurement evidently did not appear until ca. A.D. 600-800 (some 2300-2500 years later than suggested above) in archaeologically better known areas east of the Sierra (Bettinger 1976; Garfinkel and Cook 1980). Hence, the idea of piñon nut exploitation as early as 1200 B.C. is not substantiated by the cited data.

Despite these shortcomings, the Bear Mountain report stands as an essential reference for anyone interested in the archaeology of eastern California. It is hoped that the BLM will continue to publish such studies in the future.

#### REFERENCES

Bettinger, Robert L.

1976 The Development of Pinyon Exploitation in Central Eastern California. Journal of California Anthropology 3(1):91-95.

Garfinkel, Alan P., and Roger A. Cook

1980 Radiocarbon Dating of Pinyon Nut Exploitation in Eastern California. Journal of California and Great Basin Anthropology 2(2): 283-286.



#### ANNOUNCEMENT

Due to the high cost of printing, and to the high cost of storing and mailing back issues, the JCGBA is getting out of the back issue business. Production runs are being shortened to meet the number of subscriptions sold plus a small margin for late subscribers. The Back issues now on hand, plus back issues of the Journal of California Anthropology, predecessor of the JCGBA, will be sold on a first-come, first-served basis. Write to the Editorial Office for details and watch this space for a listing of available issues in our next regular number.